elements except a power concentrator, but the Examiner has taken the position that the power concentrator is a mere provision of power to the infrastructure and that the type of connectors is a matter of design choice. The Applicants respectfully traverse the rejection on at least three grounds. Further in response, the independent claims have been amended to clarify the claimed invention.

The present invention focuses on an environmentally-hardened baseband network where, as has now been discovered, interconnections of a baseband backbone and baseband *branching* nodes and the reliability of power to operate the units of the network are primary concerns.

The Suzuki patent teaches none of this.

The examiner has interpreted Suzuki as teaching " a plurality of communicating stations communicating over the backbone through the nodes, *the nodes each housed in different buildings* (Suzuki Fig 1 elements 21-25). However, a reading of the entire Suzuki specification (for instances of the deployment of *branching nodes* and *switching hubs*) indicates that Suzuki teaches away from such a baseband network with its autonomous environmental hardening and redundancy. Suzuki teaches only of a standard nonbaseband ATM switching installation within *a* building that houses an entire network. Its Figure 1 (Col. 1, lines 51-52) merely shows that a *switching hub* and its associated *terminal nodes* are located on individual floors of *the same environmentally-secured* building (Col. 1, lines 51-53, 58, 61-67) where it is common practice for a centralized electrical power source for the building to provide power to the switching hubs and to the nodes (by whatever definition). Suzuki thus is useful only to teach conventional network deployment in a building where power and environmental protection of the building are readily available.

Suzuki does not teach any form of multiple building deployment requiring that switching hubs be located outside of the protection of a secure building and away from power sources and from environmental protections offered by a building. Thus it is silent on the subject of alternative powering schemes and environmental protections asserted by the instant claims.

The Examiner has contended that it would have been obvious to one of ordinary skill in the art to use a power concentrator for powering up branching nodes as opposed to using building power. The Applicants respectfully traverse this contention. Heretofore, commercially-available electrical power concentrators did not exist. Even as of this writing power concentrators do not exist. It was by the Applicants' disclosure that the concept of power concentrators for baseband networks was first introduced. In any case, the Examiner misses two key points: 1) outdoor deployment has required remote powering of network equipment. That has been a deterrent to deployment of conventional networks in Neighborhood Area Network (NAN) configurations as taught in the specification; and 2) the Examiner appears to overlook that the power concentrator is an element which is distinguishable from a conventional power supply. Whereas a conventional power supply merely converts power from a single power source, a power concentrator uses multiple, redundant power sources from different origins (buildings) and different power line phases/circuits to supply a single set of power requirements to a single load. The use of a power concentrator thus enhances the reliability of power for the branching nodes. (See Specification, Page 21, lines 16-26+.) The power concentrator also provides other features not found in a conventional power supply, such as power conditioning (i.e., transient protection and voltage regulation). Thus the recitation of a power concentrator represents a nonobvious departure from the applied prior art.

The term "node" as used in the claims is to a branching node. The node operates at baseband, which is contemplated to be at the low levels of an OSI model, using an IP packetized direct addressing scheme, where full bandwidth is available through the branching node. Suzuki's definition of *node* clearly indicates a workstation or end node. That clearly differs from that of the instant Specification that defines a "node" as a branching node, "hub" or switch (Fig 1 element 26, and page 13 lines 4, 7) that connects local backbones (Fig 1 element 16) in the middle of a network. The instant Specification teaches that the hubs 26 are deployed *outside* of the buildings and require remote powering and environmental protection (and that's why it is a Neighborhood Area Network).

The Applicants have also specified the use of specific types of enclosure and connectors. These issues are not even addressed by the art of record. However, in view of the objection to quick-connect type connectors, this limitation is dropped in favor of generalized connectors for power and network communications. Since home connection boxes of this type have not been known, there has been no suggestion in the art as to what features such a box must have.

Finally, Suzuki does not teach a *plurality* of connected switching hubs. These can be connected in series or daisy chained as illustrated in Figures 1 and 3 to extend the physical size and range necessary for a NAN to operate. Suzuki teaches only the type of configuration that requires a single switching hub to be placed between the backbone and the users or nodes as limited by the operation of the VLANs.

Clarifying amendments emphasize these differences.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with Markings to Show Changes Made."

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at the number below.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

19. (Canceled)

20. (Twice amended) An apparatus for linking communication stations within a geographical region in computer communication, comprising:

a high speed backbone;

a plurality of branching nodes connected to the high speed backbone for relaying digital communications at baseband;

a plurality of communicating stations communicating over the backbone through the branching nodes, the branching nodes each housed in [difference] different buildings; and

a home connection box having connectors for connecting a communicating station with the hub, the connectors including a network communications connector and a power connector for supplying power from the communicating station to the hub;

wherein the [plurality of] branching nodes each [comprising] comprise:

a hub directly connected with others of the [plurality of] branching nodes and directly interconnecting the plurality of communicating stations in digital communication; and

a power concentrator [located within one or more of the branching nodes], the power concentrator receiving power from a plurality of communicating stations in communication with the branching node and powering the branching node with the received power, the received power being redundant, in that at least one [or more] of the communicating stations can go off-line without stopping power to the branching node[;]

[a home connection box having quick-connect types of connectors for connecting a communicating station with the hub, the connectors including a network

communications connector and a power connector for supplying power from the communicating station to the hub].

21. (Amended) An apparatus for linking communicating stations within a geographical region in computer communication, comprising:

a high speed backbone;

a plurality of communicating stations communicating over the backbone through [the] branching nodes for relaying digital communications at baseband, the branching nodes each housed in different buildings, at least one of the communicating stations comprising a residence;

a hub communicating with the high speed backbone and directly connected with the plurality of branching nodes and directly interconnecting the plurality of communicating stations in digital communication at baseband, the hub largely housed out of doors within environmentally controlled housings and powered by power from a plurality of power sources each located within a different one of the plurality of the buildings;

a protective pedestal housing the hub, the protective pedestal located out of doors;

a power concentrator located within one or more of the branching nodes, the power concentrator receiving power from a plurality of the communicating stations in communication with the branching node and powering the branching node with the received power, the received power being redundant, in that one or more of the communicating stations can go off-line without stopping power to the branching node; and

a home connection box having [quick-connect types of] connectors adapted to connect a communicating station with the hub, the connectors including a network communications connector and a power connector for supplying power from the communicating station to the hub.

22. (Substitute for claim 19) The apparatus of claim 20, further comprising means for transmitting data from a security and alarm system from a plurality of the individual communicating stations to a central security office over the plurality of branching nodes.